

The CONTENT OF INTELLIGENCE

A Digest from
Strategic Intelligence
by Sherman Kent



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Chapter 1

INTELLIGENCE IS KNOWLEDGE

This paper deals with "high-level foreign positive intelligence;" short for the knowledge our state must possess of other states to assure itself that its cause will not suffer nor its undertakings fail from sheer ignorance. Upon this knowledge we base our high-level national policy toward the states of the world.

Notice all knowledge of our domestic scene is left out (the sort which lies behind the police function). Foreign positive intelligence is truly "foreign" in purpose, scope, and substance. The word "positive" denotes that this intelligence is neither counter-intelligence nor counter-espionage designed to uncover domestically-produced traitors or imported foreign agents. The words "high-level" exclude operational, tactical, and combat intelligence.

How describe this kind of knowledge?

I have adopted a functional approach. It starts from the premise that our state, in order to survive in a world of competing states, must have two kinds or areas of policy. The one is its own self-initiated, positive, outgoing policy, undertaken in the interests of a better and more secure world order and a higher degree of national prosperity. The other is its defensive-protective policy necessarily undertaken to oppose those policies of other states which are inimical to our national aspirations, better called our policy for national security.

Consider our positive policy first. To be effective, its framers, planners, and implementers must be able to select the proper instrument of persuasion from a long list of possibles, i.e., should one select a resolution in the UN? diplomacy? political and economic inducement? threat? force? or some combination of these instruments?

Now neither this selection nor its subsequent application can be made without reference to the other fellow, the other country. Hence, before policy leaders take any action they would be well advised to know:

how the other country is going to receive the selected policy and what it is prepared to use to counter it;

what the other country lacks in the way of countering force, i.e., its specific vulnerabilities;

what it is doing to array its protective force;

and

what it is doing, or indeed can do, to mend its specific vulnerabilities.

It follows that our policy leaders must know many things about other countries as objective entities:

For example:

- a. The physiques of these countries; their natural topography and environment and the structures which man has added (his cities, his agricultural and industrial enterprises, his transportation facilities, and so on);
- b. their people - how many; how they are settled; how occupied;
- c. the status of the arts, sciences, and technologies of these people (and I would include in this the status of their armed forces);
- d. the character of their political systems, their economies, their social groupings, their codes of morality, and the dynamic interrelations which prevail among all these.

Now consider, secondly, our defensive-protective policy - that of national security. Here our policy leaders must make constant provision for the positive aggressive policies of *other* states. Some of these policies we will regard as hostile to our interest. Some we must block; some, we may meet half way. To frame and operate our policy we must know the nature and weight of the instrumentalities which these other countries can place behind their own policies, and we must know the direction those policies are likely to take. We must know this so that we will not be taken by surprise; so that we will be in defensive or offensive readiness when the policy is launched. When such things are known, you know much about the other country's *strategic stature* and something of its probable intentions.

It can be seen from the foregoing that the first class of information required is essentially descriptive and reportorial; descriptive of relatively changeless things like terrain, hydrography, and climate; descriptive of changeable things like population; of more transient phenomena such as governmental or economic structures.

The second class of information deals with the future, its possibilities and probabilities: how another country may shape its internal forces to service its foreign policy or strategy; how it may try to use these strengths against us; when, where, and with what effectiveness. This is speculative and evaluative.

Now we perceive the statics, the dynamics, and the potentials of other countries; perceive the established things, the presently going-on things, and probable things of the future. Taken together these make up the subject matter of high-level foreign positive intelligence, or as I shall call it henceforth - strategic intelligence.

In the following pages I will set forth the substantive content of strategic intelligence in its three basic forms: the basic descriptive element, the current reportorial element, and the speculative-evaluative element.

Chapter 2

SUBSTANTIVE CONTENT: THE BASIC DESCRIPTIVE ELEMENT

The descriptive element of strategic intelligence is what gives meaning to day by day change and the groundwork without which speculation into the future is meaningless.

In the recent war the belligerents compiled encyclopedias on countries they fought, planned to occupy, or swing into their orbits. The basic aim was to provide the strategic planner with enough knowledge of a country to make calculations on its attributes as a zone of combat. Actually they served a hundred uses, by no means all of which were solely military. A survey of the table of contents of a typical German book will indicate its scope:

- I. General Background. Location. Frontiers. Area. History. Governmental and Administrative Structure.
- II. Character of the Country. Surface Forms. Soils. Ground Cover. Climate. Water Supply.
- III. People. Nationalities, language attitudes. Population distribution. Settlement. Health. Structure of society.
- IV. Economic. Agriculture. Industry. Trade and Commerce. Mining. Fisheries.
- V. Transportation. Railroads. Roads. Ports. Airfields. Inland Waterways.
- VI. Military Geography. (Detailed regional breakdown).
- VII. Military Establishment in Being. Army: Order of Battle, Fixed Defenses, Military Installations, Supply. Navy: Order of Battle, The Fleet, Naval Shore Installations, Naval Air, Supply. Air: Order of Battle, Military Aircraft, Air Installations (see List of Airdromes, etc., Special Appendix), Lighter than air, Supply.
- VIII. Special Appendixes. Biographical data on key figures of the government. Local geographical terminology. Descriptions of rivers, lakes, canals. List and specifications of electric power plants. Description of roads. List of airdromes and most important landing grounds. List of main telephone and telegraph lines. Money, weight, and measures. Beaches (as for amphibious military operations).

A table of contents is the bare bones; it does not reveal the character and bulk of the surrounding tissue. The knowledge which lies behind a simple one-word entry is encyclopedic.

Take "transportation" and consider its details. The road section begins with a map; then follows a kilometer-by-kilometer log of the main routes, with observations on surface, width, grades, curves, fills, cuts, and bridges; then follows an overall appreciation of the route under survey. These seemingly endless data have been assembled to permit the transportation man to make the calculation: What speed may the largest and heaviest vehicle maintain from A to B and how many such vehicles may pass at that speed before the road (and in consequence the vehicles) will start disintegrating?

Consider another category, "ports". Here there is: area of protected water, depth (at low water ordinary spring tides), dockage and depth at dockside, cranes, transportation for clearing docks and harbor area, warehousing and storage, harbor craft, local stevedoring situation, bunkering, watering, and repair facilities. All these and many more things - all of them in considerable detail - you must know before you can plan effective use of the port. Most of these things you can find out; some are not learned because no one asked the right question.

For example, the transportation officer responsible for debarking our men and equipment in the port of Algiers was well supplied with the most detailed knowledge, but still intelligence failed him. It did not tell that virtually every square yard of dock space was jam-packed with enormous barrels of wine and equally large and unhandy bales of straw.

One of the officer's duties was to unload and move a number of fighter aircraft to nearby Maison Blanche airdrome in the shortest time. If the fully assembled planes could be off-loaded and wheeled down the docks, clear the harbor area, and down the highway, he would have loaded them on ship-deck ready to fly. But he was not sure of the width of the streets along his itineraries and so he removed the wings. If intelligence had anticipated such a requirement, the officer might have saved some time. At least one route proved amply wide for the job.

Now, to close this most condensed presentation, consider a final item--the operational airfield. First it must be analyzed from the point of view of how well it might serve the purposes of a potential enemy. What is its exact location and its location relative to other airfields and supply centers? What is its elevation above sea level? What supply facilities does it enjoy? Its place in the transport and communications net, in the electric power grid; the character of its shops and hangars, barracks; its fuel, lubricant and munitions storage facilities? What planes can it accommodate and how many (length and type of runways, taxiways, revetments, hard-stands, dispersal areas)? What hazards to air navigation does it present? What protecting AA positions and smoke installations does it have?

This same field might be analyzed as to its susceptibility to attack: what are its identifying characteristics from the air? what camouflage is used or may be anticipated? how vulnerable and how recuperable are its installations if subjected to bombardment?

Again the field might be analyzed from the point of view of use if captured. Can the machine shops, if taken unscathed, be used for one's own plans? Can the revetments and hard-stands? If not, how much must they be modified, etc.?

The little set forth above could be blown-up to many pages as other knowledge requirements were elaborated. Let it suffice, however, to illustrate the scope, depth, and complexity of knowledge merely to serve one aspect of war making. I now indicate the substantive character of three other aspects of wartime intelligence, that of strategic air bombardment, of political and economic warfare, and of military government.

Strategic Bombardment

The crux of strategic bombardment intelligence is target selection. Assuming urgency, you must select those sectors of the enemy's war machine whose destruction will most significantly, rapidly, and permanently weaken his striking power. Since there may be several such sectors, and since they all cannot be destroyed in a single raid (even with the A-bomb) you must not only identify such targets, but you must arrange them in order of importance.

These most vulnerable areas cannot be picked out from less vulnerable areas until a great deal is known about the enemy's *entire* way of life and his *entire* way of making war.

Before the planes went off on their first mission of systematic destruction, the planners for the bombardment of Germany had to know a very great deal about the airframe, aircraft-engine and aircraft-component production, the production of ball bearings, of synthetic rubber, and of oil. Moreover, before they decided that these sectors were the ones whose destruction would give them the most significant, rapid and permanent weakening of German war-making capacity they had to know a very great deal about other sectors.

Still more descriptive knowledge was required to carry out the attack. Our bombers were to bomb structures that the enemy was trying hard to conceal from ken, camera, and eyesight. Their pinpoint location, susceptibility to high explosive and incendiary, the ease with which they could be repaired, was more descriptive knowledge for which strategic intelligence and operational intelligence were responsible.

Political and Economic Warfare

A great deal of war, i.e., political and economic warfare, is unorthodox. It is fought with unconventional weapons. In these warfares you

try to do two things: weaken the enemy's will and capacity to resist, and strengthen your own and your friends' will and capacity to win. In their politer guises both of these warfares are employed as instrumentalities of the grand strategy of peace; and both have their own intelligence requirements in war and peace.

These two warfares encompass a wide range of possible activities directed at a wide range of objectives. On the political side we may start with international alliances of friendships to be strengthened or strained and international animosities to be smoothed over or aggravated.

There is a wide range of potential targets: first of all the armed forces of the opponent and their morale. Then there are the political dissidents, maladjusted social groups, the under-privileged, self-conscious minorities, labor leaders, gold-star mothers, pacifists, angry housewives, emergent messiahs, gullible or corruptible officers of government, and a hundred other categories of the misinformed, displeased, annoyed, unsatisfied, and outraged elements of the population.

The instrumentalities which total war suggests in the exploitation of these targets are numerous and may be as thoroughly unlovely as shooting war itself. Begin at the gentle end, truth itself - truth purveyed openly by radio of known origin, by newspapers in miniature form (delivered by aircraft). Then comes the distorted truth which we call open propaganda, and with which we associate the names of Lord Haw Haw, Axis Sally, Tokyo Rose, and the Japanese artist who designed fulsome five-color depictions of what the "Yanks" were doing to the wives of Australian soldiers. Next, is what is termed black propaganda, that which purports to come from dissident elements within the enemy's own population, but which is really carried on in great secrecy from the outside. Sometimes black propaganda is done by radio, sometimes by leaflet, fake newspaper, forged letter, or by any means occurring to perverse ingenuity.

Then there are other instruments which can be employed only by penetrating enemy lines. This group leads off with the rumor invented and passed along by word of mouth, it includes subornation of perjury, intimidation, subversion, bribery, blackmail, sabotage in all its aspects, kidnaping, booby trapping, assassination, ambush, the franc tireur, and the underground army. It includes the clandestine delivery of the tools of the calling: the undercover personnel, the printing press and radio set, the poison, the explosives, the incendiary substances, and the small arms and supplies for the thugs, guerrillas, and para-military formations.

The instrumentalities of economic warfare are simon-pure by comparison. In one idiom they consist of the carrot and the stick, or in Professor Viner's inversion, the Big Stick and the Sugar Stick. Translated into technical idiom they involve: blockade, preclusive purchase, freezing of funds, boycott, embargo, and the black list on the one hand, and subsidies, loans, bilateral trade, barter, and purchasing agreements on the other.

Before calculations of risk, effort, and effectiveness can be made, all phases of one's enemies' polity, society, and economy must be understood, their vulnerabilities appraised, and methods of pressure selected. A political warfare as deadly as the Germans used in Europe and as the Japanese used in the Co-Prosperity Sphere of Greater East Asia was based upon a large amount of accurate descriptive knowledge.

Military Government

The war over, our responsibilities continued in the civil activities of the military government of occupied territory. The Army-Navy Manual of Military Government and Civil Affairs which "states the principles which serve as a general guide. . . (to the exercise of) military government and control of civil affairs in territory occupied by forces of the United States" lists the occupant's responsibilities in twenty-three named and one miscellaneous category.

The degree of the occupant's responsibility is circumscribed by the nature of his mission, i.e., he will try to run the country with an eye merely to the prevention of those evidences of dissatisfaction: "disease and unrest," as the formula goes. Even so the responsibilities are large; so large that they cannot be undertaken without a very careful evaluation of objectives, formulation of policy, and a great deal of highly detailed planning. Here is another legitimate demand upon the descriptive element of intelligence: the nature of the society, polity, and economy, i.e., new encyclopedias. This time they cover new aspects of familiar ground. They deal with government not as something to be subverted by political warfare, nor with physical plant as something to be bombed. They must deal with government and industry as things which the occupant must conserve for his own use. Not the data necessary to blow up a railroad or run one's own military trains over it; but such things as its indigenous management and how it may be put back on its feet.

In the foregoing pages I touch upon certain omnibus studies which serve the strategic requirements of war and shade off into post-war. Two more kinds of encyclopedia are typical of peacemaking and peace itself. The first can be called the peace handbook, the second the general purpose survey.

At the end of World War I, the British delegation came to Paris equipped with any number of little blue books. Sponsored by the Foreign Office and used by the delegates, they were what might be called a peace-maker's Baedeker. In short, terse paragraphs, and appendixes containing the most important documents of state, treaties, etc., they aimed to supply the minimal needs of officials charged with drafting the treaties. A brief of the contents of the two volumes on Austria-Hungary will indicate the general substance of the work.

The study is first broken down according to seven regional components of the former Austro-Hungarian Empire: 1. Austria-Hungary.

2. Bohemia and Moravia. 3. Slovakia. 4. Austrian Silesia. 5. Bukovina. Transylvania and the Banat. 7. Hungarian Ruthenia. Within each of the regional sections there is a breakdown by subject. The section on Bohemia and Moravia ran to 109 standard-size pages. No one who read them could have remained ignorant of the main ethnic and economic problems which beset the men responsible for drawing the western frontiers of the new Czechoslovakia, and one who read them would acquit himself better at the peace table.

There were many other handbooks in the series. The book on France has a long and detailed section on Alsace-Lorraine; the one on Germany has sections on Silesia, the Kiel Canal and Heliogoland, and the Colonies; the one on Turkey, an excellent treatment of the Straits question; and there is a short study on the Yugoslav Movement.

Could there be such a thing as a general-purpose handbook of peacetime? Yes. It would be similar to some of the encyclopedias already described.

The foregoing forms of the basic descriptive element are broadest in one dimension and likely to be shallower in the other. Two other forms are worthy of mention: they are the narrow and deep study, and "spot information." Since many of the examples of the past pages were taken from a war context, these next will be taken from that of peacetime.

The Narrow-Deep Study

The national peacetime objectives of this country are numerous and the grand strategy to attain them a many-faceted affair. Everywhere one looks in the world a national objective is on the block. In the New York Times for a day taken at random there were between fifty and sixty news items of concern to officials of our federal government. The items touched fourteen sovereign states, three dependent areas, five areas under U. S. Occupation and five subjects of importance all the way across the UN board.

Under Secretary of State Clayton, appeared, according to one of these news items, before the House Foreign Relations Committee to explain and defend a request for 350 million dollars for continuing UNRRA functions. One of the beneficiaries would be China. Mr. Clayton emphasized that the distribution of relief would be rigidly supervised and controlled by the United States. It was in our power to do something in defense of our objectives and interests in China. What kinds of knowledge should Mr. Clayton have had?

First and foremost he should know how many people there were in China and how many of them were starving. Then he would have his own notion of the size of the calamity. Were 2 per cent starving or 15 percent? Next he should know if the starvation of x per cent of the Chinese was something, that happened every year, or if it was something happening because of special post-war conditions. He would wish to know this to decide the basic question - is there any use trying to feed the Chinese? For if Chinese were

chronically unable to produce enough food or amass sufficient foreign exchange to import foreign food, was there any point in taking China on as a permanent charge? If this were true, and a healthy, unified and democratic China one of our national objectives, should we not perhaps go about it in another way?

But assuming that Mr. Clayton knew that famine was not chronic, what other things should he know? He should know how much food of what kinds would be necessary; how food was normally distributed in China and if these distribution systems were partially to blame for the famine. If they were, he should know how their faults could be overcome and whether or not that task in itself would be too large to underwrite. He should also know what kinds of food were acceptable to the Chinese. Even seriously undernourished people are astonishingly choosy about the staples of their diet, as was proved after the last war. He should know - assuming the Chinese insisted upon rice - if the world rice market was able to deliver in exchange for dollars. He should know, as far as possible, what internal and international consequences might follow a successful operation.

One can imagine Mr. Clayton armed with a study which answered all these questions and many more. It would require much work, for such knowledge will not be lying around in neat bundles.

Spot Intelligence

There is a category of strategic intelligence that the trade calls "spot intelligence," or "Information Please," or "Ask Mr. Foster." What it supplies is usually in answer to some innocent-sounding question like: What side of the road do cars run on in Petsamo? What is the best map of southern Arabia? What is the depth of water (LWOST) alongside the Jetée Transversale of Casablanca? What are the characteristics of domestic electrical current in Sidney? How much copper came out of the Bor mines in 1937? How good is the water supply in Hong Kong? When did Lombardo-Toledano last go to Venezuela? What are the administrative units of the USSR?

With this sort of question, there are others answerable only by maps, diagrams or plans and photographs. The descriptive element must stock such items or know where to find them. Distasteful as "spot intelligence" is to strategic intelligence, it is one of the items which must be kept in stock.

In conclusion, it can be seen that in order for us "to assure ourselves that our cause will not suffer nor our policies fail because they are ill-informed" our intelligence organizations must be prepared to describe a large number of phenomena. They must be prepared for more than this however. Description involves stopping the clock and the clock cannot be stopped. It goes on; and descriptions of yesterday's things are out of date tomorrow. To remedy this defect, a second element of intelligence is essential. This is the current reportorial element which aims at keeping certain descriptions up to date.

Chapter 3

SUBSTANTIVE CONTENT: THE CURRENT REPORTORIAL ELEMENT

The phenomena of life which appear in encyclopedias can be regarded as frozen in mid-passage. The obvious fact, however, is that practically nothing stands completely still, and that the most important characteristic of existence is change. The requirements of grand strategy must everlastingly take into account this fact of change. Keeping track of change is the function of "current reporting."

It is worth making the point that change moves through many-way streets, and that there are many kinds of change. For example, it is as important to know that the military establishment of a potential enemy is being demobilized as it is to know that it is being built up or merely reoriented around a new weapon or a tactical concept. It is as important to know when the level of prosperity in a friendly country is rising as it is to know that it is going on the rocks; as important to know the emergence of a friendly government in a hitherto hostile state as it is to know the downfall of a hitherto friendly government. In fact the direction of change is a matter of highest significance.

If the current reportorial phase of intelligence is to do the job; if an important part of intelligence is the observation of day-by-day developments what phenomena should be put under "surveillance"?

The following categories, although rather arbitrary, are usual:

1. Personalities. The basic-descriptive element will have chronicled in its biographical encyclopedias and files the names of people who *were* important. The reportorial element must keep track of the present goings, comings and liaisons of these people. More important, it must pry beneath the surface to discover the emergent figures of tomorrow. Who knows the leader of the French Communist Party in 1960? The head of the Soviet Union in 1955? Who will be the chief of staff of the Yugoslav air force? The leaders of a divided Palestine? Who will be president of Lever Brothers or United Chemical? The director of the Pavlov Institute and leader of the Latin American Confederation of Labor? These men are alive at this moment. Where are they? What are they doing? What sort of people are they?

The future is by no means free to nominate such officials by random choice. The chances are that the future must select from a fairly narrow slate of candidates. At this moment they are the comers in business, the military, the trade union movement; in politics, the arts (let us not forget Paderewski), education, and the conspiratorial underground). The job is to find these emergent leaders and watch their progress so that as revolutions brew and deaths approach, the human replacements may be known.

An intelligence operation to do its job on men must know their character and ambitions, their opinions, their weaknesses, the influences which they can exert, and the influences before which they are frail. It must know their friends and relatives, and the political, economic, and social milieu in which they move. Only by knowing such matters can the dimensions of leadership be glimpsed and can one guess at the change toward which the new leader will strive when he comes to power.

2. Geographic. There are already descriptions of the physiques of other countries. Current reporting must continuously improve and extend these descriptions. Not merely must it chronicle the changes that man is making, but also it should be abreast of the widening horizons of geophysical knowledge. What can be observed in such matters as erosion rates, the silting of rivers and harbors, weather, beaches, water power sites and supplies of drinking water. What is being discovered in the fields of hydrography, geodesy, and geology.

3. Military. The armed force-in-being, as outlined in the preceding chapter, has been carefully described as of a certain date. The reportorial element has the task of keeping track of developments within the establishment. It must know of new legislation which will set the size and quality of the force. It must keep track of recruitment policies and their success and failure; changes in training enlisted men and officers. It must know developments in the training of troops, the social strata from which the corps of officers is recruited, the economic status of men and officers. No matter what the difficulties, it must try to keep track of those changes which the other country properly regards as its own military secrets: such things as new fighting ships, new types of aircraft, new weapons of horrendous sorts, new devices for improving fighting efficiency, changes in morale and in the loyalty of the force in its regional, political, religious, and nationalistic orientation.

4. Economic. The handbooks have stopped the economic machine at a certain point in time and described it. The reportorial element has the task of keeping track of current developments. It must note the emergence of new economic doctrines and theories - for purposes of example I cite a range which lies between Keynesian theory, down through Ham and Eggs, to the Technocrats. It must keep careful track of changes in the housekeeping side of the armed forces, administrative reorganizations, and the like, and it must note changes in government economic policy-policy affecting industry, the organization of business, agriculture, banking and finance, and foreign trade. It must know the changes which are occurring in the size and distribution of national wealth and income, of changes in the standard of living, wages, and employment. It must watch for new crops and the developments of new methods of agriculture, changes in farm machinery, land use, fertilizers, reclamation projects, and so on. It must follow the discovery of new industrial processes, the emergence of new industries, and the sinking of new mines; the development of new utilities and the extensions of those already established. It must follow changes in the techniques of distribution,

new transport routes and changes in the inventory of vehicles (autos and trucks, locomotives and cars, transport aircraft, canal boats, and merchant shipping). Perhaps most important in the age of atomic fission, it must note discoveries in new natural resources, notably the discovery of high-grade uranium deposits.

5. Political. The reportorial element must pay strictest attention to basic constitutional change and events such as those which have occurred in the past in France and Italy. It must observe how political power blocs are lining up on significant issues, and how they may be splitting into factions, disintegrating into other groups, or joining them en bloc. It must watch changes in the political doctrines of these groups; changes in relationship among the central, regional and local political authorities, and the major shifts in policy toward domestic, foreign, colonial, and imperial problems. It must follow new legislation which will make political expression either more free or less free. It must watch national and local election results for the emergent political figures. It must follow new pressure groups and other organizations capable of political influence from outside of party framework. It must know of new governmental and administrative techniques.

6. Social. Perhaps the most important single social phenomenon that the reporting element must watch is population. It must watch: its growth or decline, and its rates of growth and decline; changes in its age groups, its occupational groups, and consumer groups. It must watch for changes in distribution between city and country, and between regions. It must take note of migrations within and emigration from the country, and until time and permanent residence envelops them, it must have an eagle eye on displaced persons. There will also be changes in the social structure. What groups are emerging to social and economic eminence, what groups or classes of groups are sinking? What are the developments within the labor force? Its changes in size and structure, and above all how it is organizing, and under what leadership, in its struggle with management? What is happening to church membership; who is joining clubs and what kind of clubs; who is founding new lodges, secret societies, and cooperatives?

Intelligence, must also know a large number of other things about the society, such as changes in the way of living, development of new housing, changes in the home economy and family diversions. It must be aware of changes in taste, manners, and fashions. It must follow the program of educational institutions of all levels, and worry almost as much about the changing content of the elementary history textbooks as it must about changes in the curricula of the highest graduate and professional schools. It must concern itself with government policy toward education at all levels and with changes in the relationship between government and non-governmental organizations, such as the churches, the trade unions, the clubs and societies. It must know of the changing relationship among minority groups within cultural, social, and economic groups; and it must watch for the changes in the statutory and judge-made law, which in turn change the course of human behavior throughout the population pyramid.

7. Moral. Within the wide range of morals the reportorial element must heed changes in the basic doctrines of life: the waxing or waning of religion, of patriotism and nationalism, of belief and confidence in the ruling order and the national myths. It must know of change in popular attitudes toward the purge of undesirables, the nationalization of private property, party government, civil marriage, lay education, rights of minorities, universal military training, to hit a few of the high spots.

8. Scientific-Technological. Since much of the world-to-be will be the product of science and technology, the reportorial element must watch these with sharpness. It must know of significant developments in mathematics, physics, chemistry, zoology, geography, oceanography, climatology and astronomy. It must know what is happening in the realm of the social sciences. What are the students of sociology, economics, psychology, law, and history, coming up with? What new ideas are they getting that will some day have the influence of the discoveries of Locke, Rousseau, Darwin, Pavlov, Freud, or Haushofer? What is happening in the medical schools and the clinics; what are the new diagnoses, the new remedies, the new treatments? What is going on in the realm of communications: the telephone, the telegraph, the submarine cable, and above all, radio? What is happening in the world of cartography? What new areas and phenomena are being charted on the map? What new purposes are old theories being applied to, what new uses for old materials? How are any or all of these being applied to armaments?

The preceding paragraphs cover a staggeringly large area of human activities. I have written them to portray the dimensions of subject matter and not as an exhortation to the reportorial force to keep every square inch of it under active and systematic observation. It should be thought of as describing most of the real and many of the potential responsibilities of the reporting function. The question which at once arises is what fragments of the enormous whole are actually to be put and kept under scrutiny. The only answer is no answer - namely: only such fragments as are positively germane to national problems which are now up or appear to be coming.

The reporting element constantly adds freshness to the content of the basic descriptive element. It does more than this, for in keeping static knowledge up-to-date it maintains a bridge between the descriptive and what I have called the speculative-evaluative elements - a bridge between the past and the future.

Chapter 4

SUBSTANTIVE CONTENT: THE SPECULATIVE-EVALUATIVE ELEMENT

To introduce this most important and complicated element of strategic intelligence a few obvious facts are worth restatement.

Our world is very largely composed of separate sovereign states, and the contact of the United States with it ranges from the most pacific to the most belligerent. By many and diverse means we try to promote a better world order. We undertake agreements reached in the UN; bilateral and multilateral agreements with other states and groups of states; we exert pressures in behalf of world well-being and our own security; and we go to war. In carrying out this enormously complicated business we must be foresighted. We should be prepared and well girded for the future; we must not be caught off balance by the unexpected.

The problem of this chapter is the analysis of what the United States must know in order to be foresighted. This knowledge is far more speculative than that discussed in the last two chapters. Obtaining it puts a high premium on the seeker's power of evaluation and reasoned extrapolation. That is why I have called it the speculative-evaluative element of strategic intelligence.

What knowledge should the U. S. have about the future of other states in order to have the requisite foresight?

Create a hypothetical state, Great Frusina.

About Great Frusina the United States should know two things: (1) What is her *strategic stature*, (2) what are her *specific vulnerabilities* which qualify that strategic stature? If the United States can answer these two questions, it will be in a fair way to answer the next: What *courses of action* will Great Frusina be likely (a) to *initiate herself*, and (b) to *take up in response* to courses of action initiated elsewhere. The problem here is to put the finger on the kind of knowledge and the method we must employ before we can produce the answers. Such identification cannot proceed until at least two terms of recent coinage (*strategic stature* and *specific vulnerability*) are given more precision and definition.

Strategic Stature

By *strategic stature* is meant the influence Great Frusina can exert in an international situation in which the United States has a grand strategic interest. This statement is broad by intention. By *international situation* I mean any of the differences of opinion, misunderstandings, disputes, or dislocations among states which may have a bearing on world security and which therefore may affect Great Frusina's security and material welfare. Given the oneness of the contemporary world, there will be little unrelated to that

security and welfare, and consequently many areas in which Great Frusina will wish to exert her influence. By *influence* I mean all those instrumentalities that states employ in peacetime or wartime--influence through moral suasion, propaganda, political and economic threats, inducements, and actual penalties; through acts of reprisal (in the non-technical sense); threats of hostility, and war itself. Strategic stature is thus the sum total of sugar sticks and big sticks which Great Frusina possesses, to which must be added her will to use them and her adeptness in applying them.

To get at strategic stature there are a number of things you must know. The first is the probable "Objective situation" within which Great Frusina may be expected to exert influence or throw weight. Ever-present in the objective situation are the elements of geographical location and time. There are other elements. To cite a few--for purposes of illustration--is to list such intangibles as the degree of gravity involved; the nation's popular assessment of that gravity; the degree of its acceptance of the sacrifices it must make; the power line-up, that is, on what friends and on how much support can Great Frusina count; and what friendly support can its opponents muster.

The elements hinted at above, i.e., the geographical position of the contestants, the time factor, or the power line-up often, in themselves, determine the eventual outcome of a dispute in interest. The crisis passes. But many times these elements do not rule. Then there are two more things you must know before you can gauge Great Frusina's strategic stature. The first of these is the weight, applicability, and effectiveness of Great Frusina's *non-military instrumentalities* of policy and strategy. The second is Great Frusina's *war potential*.

By Great Frusina's *non-military instrumentalities* are meant those levers which lie between such a simple device as a properly worded and delivered formal note of objection or invitation, and such a complicated and dangerous device as an embargo, blockade, or other stringent economic sanction. Also are meant such things as telling Cuba we dared not continue shipping thereapeutic narcotics to her as long as she afforded haven to Lucky Luciano, well known to us as a dope peddler and general bad egg, whom one of our states had been at great expense to catch, indict, convict, jail, and later deport to Italy. We did not want Luciano in our backyard and we used a mild non-military instrumentality to get him out.

The Soviet's use of the Comintern and now the Cominform, the paraphernalia of party infiltration and front organizations, state trading, and even the World Federation of Trade Unions are comparable devices. Great Frusina will push such levers, pull such strings, and manipulate such needles and ice-picks. Knowledge of their weight, applicability, and effectiveness constitutes part of the knowledge necessary to estimate her strategic stature.

By *war potential* is meant the possible power to make war. It may be useful in talking of war potential to distinguish between Great Frusina's

actual *military force in being* and her *mobilizable military force*. This distinction is artificial because even the force in being is not fully prepared to get up and go at a moment's notice. It must be topped off, so to speak, by the issuance of battle equipment, completion of arrangements for supply and auxiliary services, moving up to the line of attack, etc. But even though much of the force needs to be topped off, there are likely to be units which are completely mobilized and ready to start shooting. Hence the distinction.

Now the problem before us is this. Given a *situation*, foreseeable or in being, what must intelligence know of it, of the *non-military instrumentalities*, the *force in being*, and the *war potential* of Great Frusina so that an evaluation can be made of her strategic stature.

The *situation*: Realize that it has not yet arisen and that the first big question for intelligence is to imagine what it will be like when it does arise. To sharpen the imagination, intelligence must have a great deal of the descriptive and reportorial knowledge discussed in previous chapters. For example, it must know a great deal about Great Frusina's foreign relations, and the apparent grand strategic plan within which she is working, and it must have some sort of rational basis for calculation of the time factor. Intelligence's reportorial staff must have kept the organization fully informed as they watched clandestinely and overtly, so that the speculative take-off will be from the most advanced point on the runway and the flight of imagination on that course which will prove to be in the truest direction.

It is perhaps worth mention here that calculations on strategic stature which are not based on some anticipated, imagined, or rationally assumed situation are not likely to be meaningful. There can be no such thing as a calculable national potential - potential for the achievement of goals by peaceful or warlike means - so long as the calculation proceeds in a vacuum. Only when you fix the adversary, the time, place and the probable means to be used can the calculation have point.

The *non-military instrumentalities*: Knowledge is based on what intelligence has been able to find out about Great Frusina's inner stability and strength and the ways she has conducted her international business in the past. Which instrumentalities will she use and with what weight and effectiveness will she use them? Intelligence may hope to possess the requisite knowledge only as it has studied Great Frusina deeply and systematically; has been able to transmute itself into the Great Frusinan foreign minister and see from his particular perspective. This knowledge, ideally is coldly objective and factual; is accurate, complete, and up to the moment.

In actual practice it is often none of these things. Certain phenomena elude description. Maybe they are supersecret and have been successfully concealed from sight - like the Japanese shallow-water torpedo. Maybe they have gone unnoticed for a multitude of reasons, for example, the beaches of a number of South Pacific islands. Maybe the published descriptions have

been lost. Faced with the necessity, intelligence inevitably falls back upon the sort of description which is a small speculation in itself; an interpolation between two known and related phenomena; or an extrapolation from an established base, a pure deduction, or a depiction from analogy.

War potential: First, your knowledge of the partly and wholly mobilized force in being will have been supplied by the people who report such matters: the military, naval, and air attaches, sent openly to Great Frusina, who are permitted to know certain fairly large brackets of data about Great Frusina's military establishment. Great Frusina permits this in exchange for similar knowledge from the countries to which she sends her own military attaches. As a general proposition every country knows a great deal about all other countries' forces in being and a great deal about most of their weapons. What they are likely not to know about are the new and secret weapons which even Great Frusina's own troops have not been permitted to practice with and learn.

To ascertain Great Frusina's war potential is a very large order. Were it not the single most important element in Great Frusina's strategic stature and an absolute must, intelligence would never attempt the calculation. But in as much as naked power, or the threat of it, is all too often the force which decides, it is mandatory that Great Frusina's opponents have some reasoned estimate of this potential.

This computation which intelligence must attempt involves an answer to the following prodigious question: What amount of active military power, or better, lethal energy, can Great Frusina dig out of herself; how many men and how well trained to fight on ground, in air, and sea; armed with what weapons of modern combat which Great Frusina can produce in what amounts of time; and finally how much such force can she project to the most strategically advantageous or necessary battleground and maintain there?

To answer such a question intelligence must know many facts and *it must know a method of combining them*. In short, it must arrange its knowledge as Great Frusina's General Staff and her Office of Production Management will normally have arranged its facts before they made their fateful decision. At no place in the intelligence operation is the professional training of the intelligence producer of more importance. The job of synthesis upon which he is embarking is one which requires the very highest competence in one or more of the sciences of politics, economics, geography, and the military art. He should not even undertake it unless he has an easy familiarity with the literature and techniques of the relevant disciplines.

Without giving the impression that you have all the facts when you have a line-up of Great Frusina's key resources, let me name them.

The first is her geographical location, the quality and extent of her terrain. Next is her population, especially that part of it which lies in the age bracket 17 to 45, and qualitatively speaking, its health, vigor, and degree

of general and technical education. Thirdly are the raw materials and power sources she possesses or has unequivocal access to: mineral (including uranium), forest and fishery resources, water power, etc. Fourth are food stuffs and feeds; next, standing industrial plant and the means of distributing the finished product. Sixth is the transportation net and the inventory of vehicles; seventh, the political structure of the state and its stability; eighth, the social structure and the inventory of virtues which the population possesses; ninth, the moral quality of the people and the kind of values for which they are prepared to make sacrifices. Sometimes this list is shortened and sometimes it is spun out, as anyone can see it might be, to fill pages and pages.

But intelligence must also be aware of the process of mobilization and what it involves. Mobilization is in essence a matter of internal *adjustment* or *readjustment*. A country organized for the welfare and security of its citizens must now put security way out in front and welfare an appropriate distance in the rear.

Mobilization means that a large percentage of the most productive age group - the men and women between 17 and 45 - are put into uniform and taught to use the complicated and expensive implements of war. Before the process is completed this group may be 10% or even more of the total population. In terms of food, shelter, clothing, medical care, transportation, communications, insurance and the tools of war it may be supported at a higher average level than was required in civil life. There must be adjustments. What adjustments? How successful is Great Frusina likely to be in making them? These two questions are the points of departure for gauging the net effectiveness of mobilization.

All adjustments must take place within Great Frusina's *polity*. Even though her government may be as dictatorial as Hitler's in 1936, there still must be political loin-girding. The less concentrated the political power, the greater must be that adjustment.

The next adjustment which the new government must initiate and supervise is in Great Frusina's *economy*. Here there are at least three things intelligence must know before it begins its analysis. (1) the amount of fat on the economy (2) the amount of slack in the economy and (3) the flexibility of which the economy is capable.

By *fat*, I mean such things as Britain had at the start of World War II: extensive external assets, a large merchant marine, access to necessary raw materials and the credits to buy them without going into current production, a large and up-to-date supply of capital equipment, a large inventory of finished goods, a national diet of three to four thousand calories per day, etc. Important elements of German fat existed in the excess capacity of machine tools, a large amount of brand new plant and new housing. The Italians had practically no fat, indeed little enough lean.

By *slack*, I mean such things as the 40-hour week, twelve to sixteen years of education for youth, small proportion of women in the labor force, unemployment of both labor and capital, only partial utilization of equipment, etc.

By *flexibility*, I mean the capacity of the economy to beat plowshares and pruning hooks into swords, and that in jig time; the ability of technicians to make typewriter factories over into machine gun factories, and put the manufacturers of dry breakfastfood into the shell-fuse business; the ability to make synthetics from scratch where the natural sources have dried up.

As adjustments take place within the economy what must intelligence know to gauge the extent and results of the shake-up?

It must know how enlargements in standing capital equipment, power resources, and in the labor force are being contrived; how strategically-necessary raw materials are being stockpiled; and for those in short supply, what success is attending the development of substitutes. It must know how speedily and efficiently heavy industry is being changed over from the manufacture of the machines of peace to the engines of war, and how deftly light industry is being shifted from consumer durables to shell fuses, range finders, radar components, and small arms. It must know these things - in so far as they may be known or estimated - and hundreds like them. Then it must be able to gauge how well the government is allocating raw materials, making its contracts with private enterprise, financing essential blocks of war industry, arranging for the equitable distribution of consumer goods, and curbing inflation; i.e., it must know how tolerable the government is able to make an otherwise intolerable life to the civilians who must produce the implements of war, suffer its economic hardships, bear its tragedies and still be denied the incentives of active participation.

None of these things can be known in the same way that one can know the number of miles of paved street in City X or the number of sugar beet refineries in County Y. Intelligence must have far more than a checklist of capital goods, labor force, and raw materials; it must have a great deal of general wisdom about the capacity of Great Frusina to pull these resources together, the strength of its political authority, its unity and resolve, its managerial competence. The intelligence worker must have a willingness to transmute himself into the Great Frusinian who is boss of mobilization, who realizes that the issues are those of national survival and who may pull any trick in the book - dirty, unorthodox, "unsound" in classical terms, and illegal - if it will get him results.

The third adjustment attendant upon mobilization is the *social* adjustment. Intelligence must know how the people will adjust to the loss of luxuries, amenities, and even necessities; how they will react to poorer if not less food, less clothing, more crowded living conditions, and less civil liberty; how they will take the departure of their young people, the disruption of families and family businesses, and the grim prospect of casualties. Few

of these things can be positively known. Intelligence must settle for approximations which emerge from devious methods of inquiry. If it cannot find out exactly how people are reacting to rationing, it may find indirect evidence by following such things as changes in government rationing regulations. These may be available in the newspapers and may indicate in so many words that the black market is booming or that civilian compliance is high. One cannot stress too heavily the importance of the indirect approach where the direct is impossible, nor can one overstress the fact that devising the indirect approach - "formulation of the method" it would be called in informal terms - is itself an act of intelligence and an essential part of the process.

The last adjustment which Great Frusinans must make and of which intelligence must take note are those within the code of their national *morality*, within their established values of good and bad. Here, perhaps, are some of the most difficult tasks which intelligence must face and some of the most important to solve. On the assumption that all the accepted moral values of life in peacetime are not values which will forward victory in war, the problem for the government is to alter these values or remodel them. The problem for intelligence is to anticipate how the people will react to these attempts. Let us suppose that Great Frusinans were brought up on the message of Jesus, how easily will they make the transition to a war morality where all evil things are pragmatically, at least, justified? How many people are going to be pacifists or conscientious objectors, and if any large number, how will their point of view affect the success of mobilization? Or suppose Great Frusinans, like some Orientals, appear to view the business of staying alive with indifference; as soldiers do not expect to survive war, indeed often seem to welcome death, what can intelligence discern in this attitude which will qualify its overall guess on war potential? A correct estimate along these lines, for instance, would have told us much about the long-range capabilities of Japan's air force.

The preceding pages have been addressed to these questions of mobilization: What adjustments must Great Frusina accomplish in turning from peaceful pursuits to preparations for the use of armed power? The second question is yet to be answered. It is: How successful is she likely to be?

Here you must try to simulate *Great Frusina's own appraisal of the situation* against which she is prepared to mobilize. How do the elements of time and space (geographical relationships) shape up in Great Frusina's probable calculations? Has she the time to prepare, and once mobilized can she expect to project her military power to a spot on the earth where it will do some good?

Against this background you will again consider what I have called the fat, the slack, and flexibility of the economy. You will reassess the skill and will of Great Frusina to plan, coordinate, and implement the huge job of mobilization. You will reconsider its probable performance with the civilian economy. Will it do a good job; will the citizens realize it? Will they be

able to see results commensurate with their efforts and sacrifices, or will things appear to be as bad as the gloomy ones have predicted?

When the speculative element of strategic intelligence knows and correctly assesses these things - drawing heavily for basic data from the descriptive and reportorial elements - it is in a fair way to know the dimensions of Great Frusina's strategic stature.

Specific Vulnerability

In speculations about Great Frusina's future it is not enough merely to analyze and add up her strategic assets. There are subtractions to be made. The negative quantities are what I am calling her *specific vulnerabilities*.

By these words I do not mean the general indefensibility of her frontier or the destructibility of her cities, or any other such thing that may be common to a great many states and may constitute a broad strategic weakness against which a strong opponent may direct his general attack. Assuming that Great Frusina is one of the world's strongest powers and that frontal attack with any of the non-military or military instruments of grand strategy is too costly to contemplate, perhaps she possesses soft spots the exploitation of which will yield results disproportionate to the outlay of efforts. If she has such soft spots she has what I am calling *specific vulnerabilities*. The problem is: What must you know to know the location and nature of Great Frusina's specific vulnerabilities?

The answer to this question is that you must have the kinds of encyclopedic knowledge described in the last two chapters; and from that select, by analytical processes, those facets of life of Great Frusina which are vulnerable to the psychological, political, economic, and military weapons you may possess.

During World War II we identified and misidentified a large number of specific vulnerabilities of our enemies. Unquestionably our correct identifications hastened the victory. Among the readiest examples of successful selection was in the strategic air bombardment of German synthetic oil and aircraft production and on the Hokkaido-Honshu coal ferries.

Peacetime affords as many examples as wartime of specific vulnerabilities and of their exploitation by the non-military instrumentalities of grand strategy. For instance; the Soviet Union's ambivalent position on the western frontiers of Poland. To the Poles, the U.S.S.R. was saying, "We assure you the Oder-Neisse line," and to the Germans in the Soviet-occupied zone whose support the Soviets were earnestly seeking, the U.S.S.R. was saying, "As agreed at Yalta, the Oder-Neisse line is not a closed issue." Mr. Byrnes in his Stuttgart speech of September 1946 exploited this vulnerability to the hilt. When he asked the Russians if they had decided how this frontier would be fixed he forced them to close a decision they wished to keep

open. It will be recalled that the Russians had to forsake the comfortable double position and reassure the Poles, thus losing support in Germany. This was precisely Mr. Byrnes's plan.

Probable Courses of Action: Estimates

If you have knowledge of Great Frusina's strategic stature, knowledge of her specific vulnerabilities and how she may view them, and knowledge of the stature and vulnerabilities of other states party to the situation, you are in a fair way to be able to predict her probable courses of action.

To strengthen the reliability of your prediction you should possess two additional packages of knowledge. First, you should know about the courses of action which Great Frusina has followed in the past. Does the history of her foreign policy reveal a pattern which she will adhere to? Has she followed certain lines of international behavior for so long that they have hardened into traditions with proven survival value. Or are they myths founded in irrationality? Will these traditions or myths exert an influence - even though an illogical influence - upon her probable present course of action? Has Great Frusina an old friend with whom she will never break; has she had over the years a real need for an "eastern ally"; has she a traditional "life-line of empire" to maintain, or the urge for "ice-free ports"? Knowledge of this order is important but must be used with caution. For while the force of tradition is strong, the present moment may be the very one in which Great Frusina is girding herself to break with the past.

Second: you should know, as closely as such things may be known, how Great Frusinans are estimating their own stature. She is not immune to errors in judgment (neither were Germany and Japan in World War II) and is capable of overestimating her own chances of success, and underestimating the strength of her opponents.

One may say in summary that if intelligence is armed with the various kinds of knowledge which I have discussed in this chapter, and if it commands the welter of fact which lies behind them, intelligence ought to be able to make shrewd guesses - estimates, they are generally called - as to what Great Frusina, or any other country is likely to do in any circumstance whatsoever.

In such fashion intelligence can have a reasoned opinion on what policies any country is likely to initiate within the next year. Intelligence should be able to estimate the chances of nationalization of a particular British industry in the next six months and the effect such a move would have on Britain's balance of payments. Likewise intelligence should be able to estimate another country's reaction to outside stimuli. What for instance, would be the probable reactions of the U.S.S.R. to an arrangement whereby the U.S. secured rights to the naval and air facilities of Mers el Kebir, Bizerta, Malta, Cyprus, and Alexandria? What would they be to a violent swing to the left of the British Labor Party or the emergence of Communist Party control in France?

Before leaving this subject the question should be asked: how valuable is the "knowledge" which emerges from this element of strategic intelligence? Are the so-called "estimates" of any value? My answer is Yes, they are of very great value if they are soundly based in reliable descriptive data, reliable reporting, and proceed from careful analysis. The value may not be an absolute and ultimate one; the speculative evaluation or estimate may not be exactly accurate, but if individual lives and the national security are at stake I would prefer the indexes of strategic stature, specific vulnerability, and probable courses of action as they emerge from this phase of strategic intelligence to the indexes afforded by the only alternative, i.e., the crystal ball. In actual fact, many a speculative estimate has been astonishingly close to what actually came to pass. The social sciences have by no means yet attained the precision of the natural sciences; they may never do so. But in spite of the profound methodological problems which they face they have advanced prodigiously in the last fifty years. Their accomplishments are large not merely in the area of description but more importantly in the area of prognosis. If the record did not read thus, this pamphlet most emphatically would not have contained a chapter on this element of the long-range intelligence job.

A Note on Capabilities

Although this discussion has faced up to the possibility of war and the mobilization of armed power, and although I have drawn many illustrations from wartime, it has so far been cased in a context - and hope -- of peace. It has been written as if we were directing our peacetime policy toward maintenance of peace and national security, but at the same time we were remembering that we might be thrust into a war which we must win. The question may be put: What happens to the speculative-evaluative element of strategic intelligence and how are our speculations changed, by the introduction of a state of war? The answer is, our speculations change in emphasis and direction, but not in fundamentals.

For example, the components of strategic stature are somewhat altered. To begin with, the *situation* may well be much clearer now. We are in it! There is a larger degree of certainty in the time factor. We are likely to be able to discern much more clearly the geographical-spatial elements and foresee exactly the place or places of major and diversionary attack. The line-up of allies and enemies will be much clearer though we may never be able to call the turn exactly.

Next, although the enemy is still using his non-military elements of grand strategy, they have been converted into quasi-military instruments. Political pressures and inducements are used with gloves off and become political and psychological warfare. The economic big stick and sugar stick become the implements of economic warfare.

The armed establishment in being is now the already-mobilized fraction plus what was mobilized during the emergency period. The big question with respect to military power is now referred to as the country's *capabilities*,

i.e., a state's ability to achieve a given objective expressed in time and force requirements. Where the enemy's objective is precisely defined - viz., to contain an amphibious operation (Normandy), or capture a vital strategic objective (Stalingrad), or destroy by aerial bombardment his opponent's ability to stay in the war (the first blitz of London or the V-weapon attack), or destroy his merchant marine (the Atlantic campaign), a broader and more explanatory definition is permissible. In this context we might say that "capabilities" means the amount of armed force (ground, naval, and air power) that the enemy can mount and maintain at maximum operational activity, without undue damage to over-all strategic commitments, without overstraining or ruining the home war economy, and without shattering the staying power of the polity and society.

Thus the problem of peacetime war "potential" becomes the problem of *maintenance* of the armed force at the level of maximum operational activity. Nearly all the factors are still very much in the calculation which intelligence made in peace, but since the war is on, the word "potential" might well be dropped.

Specific vulnerabilities are, if anything, of intensified importance and their identification one of the major tasks of intelligence. They should be exploited with all effective and available weapons, and will be defended with all the skill, ruse, and strength the enemy can muster.

Our side will be calculating the courses of action open to the enemy (our estimate of *his* capabilities). Military doctrine shies away from trying to put the finger on the one course of action the enemy is most likely to take. Rather it prefers to narrow down the alternatives. In an estimate or evaluation of these alternative courses of action, the military formula known as the "estimate of the situation" is used. Roughly speaking, this formula runs as follows: (1) knowledge of the environment, i.e., the terrain, weather and climate, hydrography, logistics, etc., (2) knowledge of the enemy's strength and the disposition of his forces. (3) knowledge of one's own forces, (4) probable courses of action open to the enemy. The courses of action will lie primarily in the field of military operations, but secondarily and scarcely less importantly in the fields of political and economic relations.

To sum up: to make an estimate of *enemy capability* in wartime you must have possession of the main categories of knowledge needed to gauge what I called the strategic stature, and specific vulnerabilities of peacetime. To get at *probable courses of action* you have to know much the same sort of thing you needed for estimating probable courses of action in peacetime.

In totting up these similarities we must not forget one very large dissimilarity. In peacetime it is not too difficult a task to come by the sort of basic knowledge you must have to make these speculations (the U.S.S.R. excepted). But during a war, when the enemy knows full well the importance of keeping you in ignorance, acquiring the basic knowledge is quite another

matter. It can be had, and much of it through perfectly overt channels, but the effort necessary to get it has been multiplied many times.

Throughout this chapter in discussing the speculative knowledge content of strategic intelligence, I may have given the impression that it is a common commodity to be had for gathering. If I have given this impression, I wish to correct it. Speculative knowledge is not common and it is not to be had for the gathering. It is the rarest ingredient in the output of intelligence and is produced only by the most competent students this country possesses. It requires of its producers that they be masters of the subject matter, impartial in the presence of new evidence, ingenious in the development of research techniques, imaginative in their hypotheses, sharp in the analysis of their own predilections or prejudices, and skillful in the presentation of their conclusions. It requires the best in professional training, the highest intellectual integrity, and a very large amount of worldly wisdom which is that subtle knowledge which comes from a set of well-stocked and well-ordered brain cells.